Scenario Planning Development for Food Advertising Supervison in Digital Media Distruption Era

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Abstract

The number of digital advertising channels is expected to overgrow in the future. The overgrowth of digital advertising will potentially increase the risk of advertising that does not comply with the requirements. Food advertising control will continue to face uncertainties in the future. Food and beverage companies have spotted opportunities in integrated communication in digital advertising such as programmatic advertising, advergames, native advertising, unidentified advertising by influencers, and blockchain advertising, which are expected to grow in the next five years. The key focal issue of this research is how digital media technology will affect the supervision of food advertising in Indonesia over the next five years. The study involved expert representatives from the Indonesian FDA, Provincial Health Office, Ministry of Communication and Informatics, University, Broadcasting Committee, Association of Advertising Companies, Food and Beverage Company Association, and e-commerce Association. Through in-depth interviews, 17 driving forces were identified and two critical uncertainties were defined. Those two critical uncertainties, digital technology advancement and digital literacy are formulated into four scenario frameworks. The research also constructs the early warning signals and indicators that distinguish one scenario from another. Scenario planning enables an organization to anticipate the uncertain future and its consequences, which necessitates carefully planning strategic responses to future opportunities and threats.

I. Introduction

The growth of digital advertising is expected to accelerate as information technology advances. Today, businesses frequently choose digital advertising as one of the media channels to market their products. All digital media advertising channels, including email marketing, mobile marketing, search engine optimization, company websites, and social media marketing, contribute significantly to brand sustainability (Ahmed et al., 2019). Digital advertising spending remained buoyant throughout 2020--even during a period of massive declines in advertising spending in the second quarter due to the pandemic. The total number of digital impressions across the internet increased by 26% over the same period (Nielsen Ad Intel, 2021).

The focus of this study will be on food advertising supervision. Food, beverages, and foodstuffs account for 30.95 percent of all e-commerce sales, followed by fashion and cosmetics at 30.95 percent (Badan Pusat Statistik. 2020). The growing number of food products, beverages, and foodstuffs sold through digital media is also accompanied by an increase in food advertising, including food advertising that does not comply with the requirements. According to the annual report of the Indonesian FDA, the percentage of

advertisements that do not comply with the requirements increased from 18.70 percent in 2019 to 33.15 percent in 2020. This year's surveillance is distinct from the previous year when online media were included.

Indonesia has a multi-sectoral approach to regulating processed food advertising. Indonesian FDA, the Directorate General of Pharmaceuticals and Medical Devices, the Ministry of Health, the Provincial Health Offices, the District Health Offices, the Indonesian Food and Beverage Entrepreneurs Association (GAPMMI), the Association of Indonesian Advertising Companies (P3I), the Press Council, the Indonesian Broadcasting Commission (KPI), and the Indonesian Consumer Foundation are the nine institutions responsible for food advertising and supervision (Susyanty, A. L., Supardi, S., Handayani, R. S., & Herman, M. J. 2014). Each institution performs different activities and has distinct obligations, yet intricately interrelated. Its execution, however, is impeded by a lack of authority and coordination among the many institutions (Badan Perlindungan Konsumen Nasional. 2013).

According to the statement above, unanticipated technological advances have a detrimental influence on the effectiveness of food advertising supervision. Additionally, food advertising regulation confronts significant institutional coordination and compliance with corporate actors. Having a future vision will undoubtedly be advantageous for carefully planning strategic reactions to opportunities and challenges.

Due to the government's objective of restricting social activities, all data collecting occurs online. This research aims to raise the issue of food advertising supervision via scenario planning techniques in line with the conditions that exist in Indonesia five years in the future. The study will concentrate on the key issues impacting food advertising supervision, the driving factors and critical uncertainties, and plausible scenarios. Due to a lack of research time and a small number of stakeholders, the outcome of this research is the best scenario planning that the researcher can deliver, and other institutions may undertake additional in-depth development if necessary.

II. Review of Literature

Conceptual Framework

A conceptual model is a justification for studying a subject and the proposed method of study to be precise and rigorous. (Ravitch, S. M. & Riggan, M, 2016:26). A variety of external influences on food advertising supervision. Scenarios illustrate how the transactional environment responds to changes in the context. Food advertisement policy in Indonesia will be influenced by various elements, including technology advancements, societal values, socioeconomic conditions, legislation, and demographics.


Source: "Ramirez et al. (2017)
Figure 1. *The role of the contextual environment in scenario planning*

Contextual changes will influence transactional contexts, including regulatory authorities, customers, and non-governmental organizations (Ramirez, 2017). The resulting scenarios establish organizational, transactional, and environmental environments.

Scenario planning is a technique that may be used to deal with future uncertainty. Scenario planning is the act of developing several diverse but feasible future scenarios and then diving thoroughly into each of them. It considers the uncertainties and driving forces that may impact the future. (B. Edgar; S. Alänge, 2014). In contrast to predicting and vision, scenario planning is a method for sensing the future (Lidgren and Bandhold, 2003). Scenario planning entails identifying the elements that influence the firm's environment. Scenario planning also operates in the face of uncertainty. Using scenario planning broadens how and why an industry might evolve in unconventional ways. Scenario planning can assist find new corporate development potential. It also identifies and handles risks to strengthen tactics and develop a learning-oriented, flexible, and creative organizational attitude. Scenario planning is one of the many methods accessible to managers for strategic planning. A manager can develop a series of scenarios by recognizing fundamental trends and uncertainties to compensate for overconfidence and tunnel vision. (Schoemaker, 1995).

III. Research Method

This study employed five-stage scenario planning process, including orientation, exploration, scenario creation, option consideration, and integration (Garvin and Levesque, 2006).
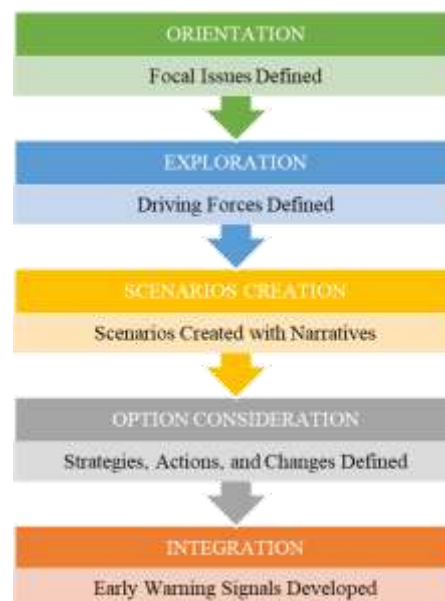
Sources: *(Garvin & Levesque, 2006)*
***Figure 2.** Scenario planning stage*

The process of elucidating business problems is accomplished by analyzing external factors using in-depth interviews and questionnaire techniques. External factors are analyzed in conjunction with public health factors using PESTEL. The food system's external environment is comprised of the stakeholder context as well as forces that are: (1) political, administrative, or legal; (2) economic; (3) sociocultural; and (4) technological (Dury, S., Bendjebbar, P., Hainzelin, E., Giordano, T., & Bricas, N. 2019). The results of

expert team interviews identified key focal issues and trends that could affect the advancement of food advertising regulation over the next five years.

Exploration is conducted to ascertain driving forces based on key focal issues. The driving force is evaluated for its impact and level of uncertainty to obtain critical uncertainty. The scenario framework in matrix 2 x 2 is composed of two critical uncertainties with the largest value / highest value. Then, for each matrix, plausible scenarios and narratives are created. After that, researchers expand on the Exploration is conducted to ascertain driving forces based on key focal issues. The driving force is evaluated for its impact and level of uncertainty to obtain critical uncertainty. The scenario framework in matrix 2 x 2 comprises two critical uncertainties with the largest value / highest value. Then, for each matrix, plausible scenarios and narratives are created. After that, researchers expand on the implications of each scenario, an option considered by the organization. Following that, the researchers determined that the indicator in each scenario acts as an early warning signal, indicating which scenario will occur.

In-depth interviews are conducted with expert representatives in the field of advertising and advertising supervision. In addition to the interview, questionnaires are distributed to the expert teams and food advertising supervisors. The questionnaire, which contains structured questions, is being used to follow up on an interview with expert representatives. The questionnaire is designed to elicit key driving force weighting values that have a significant impact and high level of uncertainty. Scenario planning will analyze the two primary driving forces that have the greatest impact and uncertainty. The expert representatives involved are as follows:

Table 1. Expert team.

No.	Level	Institutions and work experience
1.	Director	Indonesian FDA. 30 years of experience
2.	Lecturer	University. 35 years of experience
3.	Secretary General	Association of Indonesian Advertising Companies. 30 years of experience
4.	Director	Indonesian Advertising Committee. 30 years of experiences
5.	Deputy of Director	Indonesian FDA. 18 years of experience
6.	Vice Chairman	Food and Beverage Association. 20 years of experience
7.	Manager	Provincial Health Office. 13 years of experience
8.	Manager	Ministry of Communication and Informatics. 12 years of experience
9.	Manager	E-commerce Association. 6 years of experience
10.	Manager	Indonesian FDA 16 years of experience
11.	Manager	Indonesian FDA 15 years of experience
12.	Manager	Indonesian FDA. 15 years of experience
13.	Inspector	Indonesian FDA. 1 years of experience
14.	Inspector	Indonesian FDA. 8 years of experience
15.	Inspector	Indonesian FDA. 7 years of experience
16.	Inspector	Indonesian FDA 6 years of experience

IV. Results and Discussion

4.1 Exploration

The exploration phase of this research involved conducting in-depth interviews with experts in food advertising and supervision and food advertising supervisory practitioners at Indonesian FDA. This exploration aims to ascertain the factors that contribute to the success or failure of food advertising supervision in the digital age. The mapped driving force is weighted using questionnaires to obtain critical uncertainty. The top two most significant impact and uncertainty drivers are critical uncertainties.

The following table summarizes the findings from this exploration process regarding the driving force in the context of food advertising supervision:

Table 2. Driving Forces

Driving Forces
1.   **Government policy on ease of doing business**
2.   **Regulation Interconnection**
3.   **Digital food advertising regulation**
4.   **Stakeholder collaboration**
5.   **Regulation interpretation**
6.   **Company nonmarket strategy**
7.   **Economic growth**
8.   **Issues in society**
9.   **Degree of understanding/digital literacy**
10.   **Changes in social norms**
11.   **Collective contribution**
12.   **Demographic bonus**
13.   **Behavioral change**
14.   **Digital technology development**
15.   **Food process technology development**
16.   **Pandemic**
17.   **Health claims on food**

Source: Author Analysis

The 17 Driving Force then re-evaluated the condition to ascertain critical uncertainty. The assessment is carried out by distributing questionnaires to a panel of experts. Each driving force comprises two questions: one to ascertain the magnitude of the factor's impact and another to ascertain the degree of uncertainty. Critical uncertainty refers to the factor that has the greatest overall impact and uncertainty value. Both factors will then be combined to create a scenario framework. The summarizes the results of the driving force weighting can be seen in table below:

Advertising formats will continue to evolve in the internet age. There will be new technologies such as blockchain, artificial intelligence (AI), and AI robots to perform marketing tasks, amongst many others. One example of advertising development in digital media is programmatic digital advertising. Programmatic digital advertising is an automated big data system that allows organizations (predominantly retailers) to bid for the privilege to publish personalized online advertising in the right place, to the right people, at the right time (Samuel et al., 2021). India and Indonesia are the fastest programmatic digital advertising markets in 2020 (PubMatic, 2020).

Table 3. Critical Uncertainty Score

No.	Driving Force	Impact Score	Uncertainty Score	Critical Uncertainty Score
1.	Government policy on ease of doing business	22	13	35
2.	Regulation interconnection	23	14	37
3.	Digital food advertising regulation	24	11	35
4.	Stakeholder collaboration	24	14	38
5.	Regulation interpretation	24	17	41
6.	Company nonmarket strategy	21	21	42
7.	Economic growth	24	21	45
8.	Issues in society	19	21	40
9.	*Degree of digital literacy*	26	21	47
10.	Changes in social norms	21	18	39
11.	Collective contribution	25	19	44
12.	Demographic bonus	18	19	37
13.	Behavioral change	23	20	43
14.	*Digital technology advancement*	27	20	47
15.	Food process technology development	19	14	33
16.	Pandemic	20	16	36
17.	Health claims on food	17	22	38

Source: Author Analysis

Meanwhile, besides advertising, the company has also developed Integrated Brand Promotion (IBP). IBP is a process using a wide range of promotional tools that work together to create widespread brand exposure. It is brand-focused (Allen, C., Semenik, R., & O'Guinn, T., 2017:8). Significant investments are required to respond to the rise of huge digital technology.

Digital literacy is the knowledge and ability to use digitalization media, such as modern communication tools or internet networks, to locate, work with, evaluate, utilize, create, and utilize information wisely, intelligently, carefully, precisely, and of course, lawfully (Suherdi. D., 2021). The level of literacy impacts food advertising supervision, especially for consumers seeking access to information about products. In this digital era, news or hoax ads become very easy to develop into viral. Digital literacy also influences the success of food advertising monitoring in digital media. People with greater information literacy significantly increase the likelihood of identifying fake news stories or ads (Jones-Jang, S.M., Mortensen, T., & Liu, J. 2021).

4.2 Scenario Creation
The advancement of digital technology and the degree of understanding / digital literacy will be combined to create a two-by-two matrix framework scenario.

a. "Utopia" Scenario
Digital technology development continues to accelerate. Thanks to this 5G network's 10gbps network speed, you can enjoy the thrill of virtual and augmented reality whenever you want. Several major food companies in Indonesia have implemented virtual tour services to increase community engagement. A virtual tour allows you to enjoy the product

while learning its manufacturing process. Also, interactive applications created using artificial intelligence technology enable people to find product information and buy it directly. Consumers no longer need to travel long distances to buy food. Our vehicles use robotic technology to deliver your food quickly, precisely, and safely. Consumers can use a smartphone to watch streaming shows and make purchases directly from ads. The public has become a powerful advertising force. Food ads in digital media are safe because the public is aware of good advertising practices. High collective awareness helps keep social media ads from breaking the regulation.
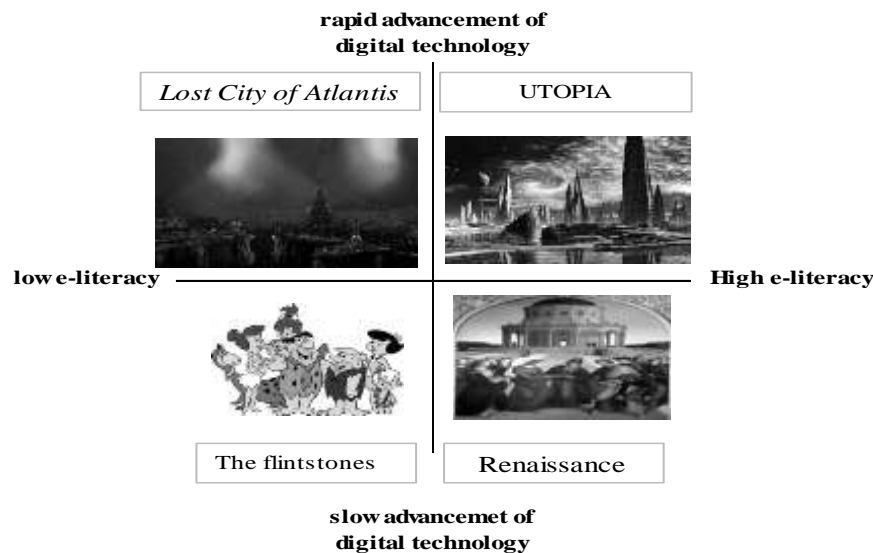
Source: Author Analysis
Figure 3. Scenario Framework

b. "Lost City of Atlantis" Scenario

Change accelerates as digital technology advances. Indonesian service providers have begun offering 5G data services. Thanks to 5G network services, Indonesians can enjoy virtual and augmented reality experiences nationwide. Some of the largest Indonesian food companies used augmented reality and games for product promotion. It is thought to be a good way for businesses to reach the community. Artificial intelligence-powered interactive applications can help people find product information and buy it directly, serving their customers better. Consumers no longer need to travel far to buy food. Our vehicles are equipped with robotics, allowing us to deliver food quickly, accurately, and safely. Consumers only need a smartphone to watch streaming content and buy when ads appear.

The institution has been working with the Ministry of Communication and Informatics to monitor food advertising in digital media. However, the community and business actors are still unaware of their obligations. Fake news and advertisements for food products with medicinal properties continue to circulate online..

c. "The Flintstone" Scenario

The government has finally shut down several digital platforms, apps, and websites suspected of spreading fake news, hate speech, and misleading advertising. As is well known, Indonesian presidential candidates will be elected in 2024. There has been much confusion about media news, digital media, and data leaks. Data protection authorities, advertising regulators, and communications (broadcasts, newspapers) are all subject to

strict national standards for the use of Artificial Intelligence in digital media (Marsden, C., Meyer, T., & Brown, I. 2020).

The government implemented this policy due to the community's low digital literacy. The public accepts all digital media information without questioning its accuracy. The community also helps spread fake news and ads that violate the rules.

d. "The Renaissance" Scenario

There is much confusion about breaking news and leaking confidential information online. Strict government regulations on the use of artificial intelligence in digital media affect data protection, advertising, and communications (broadcasts and newspapers). Agents of the law are tasked with fighting fraud (bot accounts) and other illegal communications. Following the regulation, the Indonesian government announced the ban of certain digital platforms, apps, and websites. These digital platforms, apps, and sites spread misinformation about ethnic, religious, racial, and inter-racial issues.

Both non-profits and corporations have criticized government policies. They said digital media understands Indonesian society. The public can spot fake news and misleading advertising. Also, the community can assist in enforcing regulations against deceptive advertising. According to the Indonesian FDA annual report for 2025, the public is very active in reporting inappropriate drug, food, and cosmetic advertising. Active reporting could indicate that people are already proficient in digital technology.

e. Early warning signals

Table 4 is a summary table related to early warning signals and indicators distinguishing one scenario from another.

Table 4. Early Warning Signal.

Factor	Indicator	Utopia	Atlantis	Flintstones	Renaissance
Digital technology development	Indonesian internet active users	>73% (high)	>73% (high)	<73% (low)	<73% (low)
	Digital advertisement budget spending	>60% (high)	>60% (high)	<60% (low)	<60% (low)
	Percentage of food and beverage businesses on e-commerce	>20%	>20%	<20%	<20%
	Government bans digital sites -press release	None	None	Exist	Exist
degree of understanding/digital literacy	Information Index & Data Literacy	3.0 – 4.0	< 3.00	< 3.00	3.0 – 4.0
	Drug and food business compliance survey	Increase	Decrease	Decrease	Increase

Source: Author Analysis

The total spending on digital media advertising also determines its development. According to eMarketer.com, global digital ad spending will reach $645.8 billion in 2024, representing a 51.0 – 67.8% increase in percentage terms. The threshold is the percentage of digital media advertising spend exceeding 60% of total media advertising spend.

E-commerce is also a useful indicator of the development of digital technology that may impact food advertising supervision. The percentage of accommodation and food and beverage businesses selling online is 17.55 percent, according to BPS's E-Commerce Statistics (2020). Because e-commerce sells more food and beverages, it has more advertising space available, increasing the percentage of food advertising in digital media.

The government's press release announcing the prohibition of websites, applications, or other digital technology developments in Indonesia is the next qualitative indicator. A positive value (occur) is assigned to "the Flintstone" and "Renaissance" scenarios.

The study used the Ministry of Communication and Informatics' Digital Literacy Index survey (2020) to assess the community's digital literacy. Index one stands for information and data literacy (Ministry of Communication and Informatics, 2020). This sub-index measures people's ability to verify website information's accuracy. In 2020, it will be 3.17. (Slightly above moderate). 3.0 - 4.0 (moderate - excellent) and 3.00. (Medium - bad)

Another metric used to assess community understanding/digital literacy is food business compliance. The Indonesian FDA's drug and food business compliance survey (BPOM, 2020) found that food businesses follow regulations at 77.77 percent (Good). The trend toward "Atlantis" and "The Flintstone" is intended, whereas the trend toward "Utopia" and "Renaissance" is intended.

V. Conclusion

The main focal issue of this research is how digital media technology will affect the supervision of food advertising in Indonesia over the next five years. Scenario planning is an approach that may be used to deal with future uncertainty. Scenario planning is the act of developing several diverse but plausible future scenarios and then diving thoroughly into each of them. Two critical uncertainties were identified, namely digital technology advancement and digital literacy—those two, then constructed into four plausible scenarios. Scenario "Utopia" is a scenario that occurs in an ideal situation. The advance of digital technology is accelerating, accompanied by the condition of people who have an excellent level of understanding and digital literacy. The second scenario, "The Lost City of Atlantis, illustrates the conditions where the rapid advancement of digital technology but not accompanied by the understanding or ability of digital literacy of society. Third, "The Flintstone" illustrates the conditions where the development of digital technology is hampered, and people's understanding of the digital world is also low. Furthermore, last, "Renaissance," this scenario draws a condition where technological development is hampered but fulfilled by a society capable of understanding. The research also constructs the early warning signals and indicators that distinguish one scenario from another. Through Scenario planning, the organization could have a knowledge of the uncertain future and its impact, which required planning strategic responses to face future opportunities and threats carefully.

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